

EXECUTIVE SUMMARY

Department of Ecology's Toxic Reduction Engineer Efficiency (TREE) team worked with Skills, Inc. (Skills) to find ways to reduce their chemical use, water use, hazardous waste generation, and wastewater generation. Skills is a metal finishing job shop in Washington. This assessment was conducted for their Seattle facility. The TREE team made several site visits to the Skills' facility to observe the current process activities and to identify potential opportunities. The team evaluated opportunities for the chemical process and paint lines. This report presents the TREE team's evaluation of Skill's best opportunities for chemical, water, and waste reductions.

Reduction opportunities discussed in this report are divided into two sections, the chemical finishing line and painting line. For each of these sections, a brief description of the process is included. Reduction opportunities are listed as quantifiable and non-quantifiable opportunities. The quantifiable opportunities are summarized in Table 1 below. Best management practices for maintaining Skills' secondary containment area are also included.

Skills currently uses approximately 150,000 gallons of water per month. From the opportunities they can save 134,000 per month or 89% of their water usage. In addition, Skills generates around 9,100 gallons of drummed hazardous waste.¹ Implementing TREE's recommendations can reduce hazardous waste by 3,700 gals per year for a savings of 41%.

Table 1 – Quantitative Opportunities for Skills, Inc at Seattle Facility					
Opportunity		Water Savings (gals/year)	Hazardous Waste Savings (gals/year)	Cost Savings (\$/year)	Pay Back (months)
Chemical Finishing Line					
1.	Increase part hang time	122,600	350	\$4,900/year	23 months
2.	Reduce part withdraw rate	9,900	50	\$400/year	-
3.	Install automatic timer on hose	1,440,000	-	\$13,000/year	0 months (2 days)
4.	Add 3 new rinse tanks	31,200	-	\$300/year	8 months
Painting Line					
1.	Use water filtration/recycler unit	2,400	2,100	\$28,300/year	2 months
2.	Purchase automated gun washers	-	1,200	\$6,000/year	4 months
3.	Establish paint room lead	-	-	-	-

¹ The drummed hazardous waste generation rate does not include spent paint booth filters. Skills generates about 150 cubic-yard boxes a year of spent paint booth filters.